

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN THE APPLICATION OF:

SPIVEY, ET AL.

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EXAMINER: C. TOOMER

FILED: 02/09/2004

GROUP ART UNIT: 1714

TITLE: FUEL COMPOSITION CONTAINING A MEDIUM SUBSTANTIALLY FREE OF
SULPHUR AND PROCESS THEREOF

Dated: August 30, 2007

Hon. Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

DECLARATION UNDER 37 C.F.R. §1.132

I, John K. Pudelski, a named inventor of the above-identified application, hereby declare:

1. I received a BS degree in Chemistry from John Carroll University and a Ph.D. degree in Organic Chemistry from The Ohio State University in 1988 and 1993 respectively; and have worked for The Lubrizol Corporation since June 1995 first as a Research Chemist then as a Research Manager in a Chemical Synthesis Department, responsible for the synthesis and process development of new additives for lubricants and fuels.
2. Two substantially identical fuel compositions containing a polyisobutylene succinimide were prepared and tested. The difference between the fuel compositions is:

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/Nancy S. Dedek/
Deposited by: Nancy S. Dedek

(i) Example 1 is a polyisobutylene succinimide prepared in Pilot®900 diluent oil. Pilot®900 is a aliphatic hydrocarbon base oil with less than 2 ppm of sulphur; and

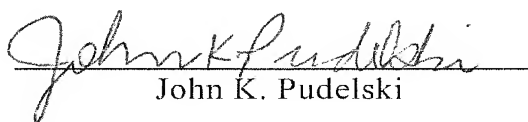
(ii) Comparative Example 1 is the same polyisobutylene succinimide as Example 1, except it is prepared in 330 solvent neutral base oil. The 330 solvent neutral base oil contains over 100 ppm of sulphur and is not an aliphatic hydrocarbon as defined by the present invention.

3. Separate XUD-9 engine tests were performed on a fuel composition containing Example 1 and Comparative Example 1. The test measures the percentage of remaining fuel flow through an injector. Typically better results are obtained in the test for samples which produce a higher percentage of remaining fuel flow through an injector. The results obtained are as follows:

Example	Results of XUD-9 Test (% of remaining flow)		
	Run 1	Run 2	Average of Run 1 and Run 2
Comparative Example 1	46	43	44.5
Example 1	50	55	52.5

4. The data demonstrates that the polyisobutylene succinimide composition prepared in Pilot®900 diluent oil (Example 1) allows for improved fuel flow through an injector compared with Comparative Example 1, prepared in 330 solvent neutral base oil.

5. Hence, the presence of an aliphatic hydrocarbon diluent oil with low sulphur content provides improved performance in the XUD-9 test compared with a polyisobutylene succinic anhydride prepared in a medium outside the scope of the present invention.


John K. Pudelski

Date: 8-30-07